

**BOARD OF SUPERVISORS**

*Brown County*



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**LAND CONSERVATION SUBCOMMITTEE**

Norb Dantine, Chair  
Dave Kaster, Vice Chair

Bernie Erickson, Mike Fleck, Dan Haefs, Norbert Vande Hei(FSA)

**LAND CONSERVATION SUBCOMMITTEE**

**Monday, December 28, 2009 @ 6:00 p.m.**

**Room 161, UW-Extension**

**1150 Bellevue Street**

- I. Call meeting to order.
  - II. Approve/modify agenda.
  - III. Approve/modify minutes of Land Conversation Subcommittee of October 26, 2009.
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1. Update on Animal Waste Storage Permit for N.E.W. Organic Digestion, LLC, 6601 County Road R, Denmark, Wisconsin (Attachment: Letter from Conestoga-Rovers and Associates NEW Organics)
  2. Land and Water Conservation Department Monthly Budget Update (11/30/09) (To be distributed at meeting)
  3. Wisconsin Working Lands Initiative – Power Point Presentation by Aaron Schuette, Conservation Compliance requirements by Jim Jolly.
  4. Grant Application Review (#09-47): Review and approval of Great Lakes Restoration Imitative grants application – Pre Proposal for Total Maximum Daily Load project for Brown, Outagamie and Calumet Counties. (Attachment 2009 pre -proposal Ag BMPS TMDL; LFox Luse Watershed boundaries; LFox SWAT sub watershed yields)
  5. Grant Application Review (#09-48): Review and approval of Great Lakes Restoration Imitative grants application – Pre Proposal for Baird Creek Riparian Projection Project.
  6. Grant Application Review (#09-48): Review and approval of Great Lakes Restoration Imitative grants application – Pre Proposal for West Shore Pike Habitat Restoration Project – Jim Jolly.
  7. Director's report.
  8. Such other matters as authorized by law.

Norb Dantine, Chair

Notice is hereby given that action by the Committee may be taken on any of the items which are described or listed in this agenda.

Please take notice that it is possible additional members of the Board of Supervisors may attend this meeting, resulting in a majority or quorum of the Board of Supervisors. This may constitute a meeting of the Board of Supervisors for purposes of discussion and information gathering relative to this agenda.

**PROCEEDINGS OF THE BROWN COUNTY  
LAND CONSERVATION SUBCOMMITTEE**

Pursuant to Section 18.94 Wis. Stats., a regular and budget meeting of the **Brown County Land Conservation Subcommittee** was held on Monday, October 26, 2009 in Room 161, UW-Extension -1150 Bellevue Street, Green Bay, Wisconsin

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**Present:** Norb Dantine, Bernie Erickson, Mike Fleck, Dan Haefs, Dave Kaster  
Norb VandeHei  
**Also Present:** Bill Hafs, Jon Bechle, Jim Jolly, Tom Hinz, Jayme Sellen  
Supervisors Andrews, Krueger, LaViolette, Scray & Zima  
Sara Perrizo, Lynn VandenLangenberg, Heidi Hietpas, Andrea Konrath

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I. **Call Meeting to Order:**

The meeting was called to order by Chairman Norb Dantine at 5:30 p.m.

II. **Approve/Modify Agenda:**

**Motion made by Supervisor Fleck and seconded by Supervisor Kaster to approve the agenda. MOTION APPROVED UNANIMOUSLY**

III. **Approve/Modify Minutes of Land Conservation Subcommittee of September 28, 2009:**

**Motion made by Supervisor Erickson and seconded by Supervisor Kaster to approve the minutes. MOTION APPROVED UNANIMOUSLY**

**Non-Budget Items**

**Communications:**

1. **Communication from Supervisor Dantine re: To have Brown County review the inspection fees for manure facilities in Brown County. (Commercial and Farm). (Referred from October County board):**

Supervisor Dantine brought this issue forward to clarify that everyone pays the same. Bill Hafs explained the inspection fee for manure facilities is placed on those farmers owning more than 500 animal units, of which there are 33 in Brown County. The fee is \$500 per animal, per year, or \$16,500 in revenue to the County. Whether there should be an inspection is not under question, but rather Hafs pointed out that liability issues enter, along with several other variables. The integrity of the facility system is under question, whether there has been damage to the liner, etc. Hafs explained that these inspections actually protect the farmer.

Supervisor Erickson suggested that if there is no change from one year to the next, that the fee be reduced to \$250 per animal unit. Supervisor Haefs pointed out that this would be lost revenue and would need to be found elsewhere.

Hafs stated that animal waste complaints were projected at 20 for 2009 and the department has already received 70 (addressed under the budget review).

*(Supervisor Haefs arrived 5:35 p.m.)*

**Motion made by Supervisor Haefs and seconded by Supervisor Kaster to receive and place on file. MOTION APPROVED UNANIMOUSLY**

**BUDGET REVIEW**

**REVIEW OF 2010 DEPARTMENT BUDGET:**

2. **Land Conservation – Review of 2010 Department Budget:**  
Performance Measures and Policy Initiatives were highlighted by County Conservationist, Bill Hafs, and a summary distributed (attached).

Performance measures include the item discussed above relative to animal waste complaints, projected to increase to 70 in 2010. In addition, winter spreading is projected to increase, along with number of ordinance permits, and animal waste inspections.

Policy Initiatives were highlighted, with Mr. Hafs requesting a delay in the well abandonment ordinance because of increased workload associated with animal waste complaints and other projects (see attached for details).

Hafs reported a property tax increase of 1.98%. Outlay includes a request for the purchase of a 4 wheel drive vehicle for \$13,286 (photo of present vehicle attached). There will be no additional staff added, with a reduction of a Technician Project Manager for the West Shore Pike Habitat by \$4,000.

**Motion made by Supervisor Erickson and seconded by Supervisor Kaster to keep the purchase price in the \$10,000 range for the 4-wheel drive vehicle.**

Supervisor Erickson suggested that the purchase of this vehicle be kept in the \$10,000 range, however, discussion by the committee resulted in a consensus that it was a reasonable request and should be left at \$13,286.

**MOTION WITHDRAWN**

Hafs summarized, stating the 2010 budget is overall \$10,000 above 2009, including the vehicle for \$13,000.

Changes in revenues and expenditures were noted, with Hafs stating mistakes were made due a misunderstanding with the new financial system. See attached.

**Motion made by Supervisor Fleck and seconded by Supervisor N. VandeHei to approve the 2010 Department Budget as amended to include changes to revenues and expenditures.**

**MOTION APPROVED UNANIMOUSLY**

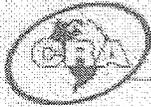
3. **Such other matters as authorized by law: None**

**Motion made by Supervisor Erickson and seconded by Supervisor N. VandenHeuvel to adjourn at 6:10 p.m.**

**MOTION APPROVED UNANIMOUSLY**

Respectfully submitted,

Rae G. Knippel  
Recording Secretary



**CONESTOGA-ROVERS  
& ASSOCIATES**

1400 Lombardi Avenue, Suite 105, Green Bay, WI 54304  
Telephone: 920-490-1663 Facsimile: 920-490-1668  
www.CRAworld.com

November 25, 2009

Reference No. 055361

Mr. Bill Hafz  
Brown County Land and Water Conservation Department  
1150 Bellevue Street  
Green Bay, Wisconsin 54302

Dear Mr. Hafz:

Re: N.E.W. Organic Digestion, LLC - Update  
Denmark, Wisconsin

On behalf of N.E.W. Organic Digestion, LLC (Client), Conestoga-Rovers & Associates (CRA) has prepared this update regarding the installation of the anaerobic digester (AD) and storage tank at N.E.W. Organic Digestion, LLC.

Per our previous phone conversation, the facility has changed their plans and will no longer be accepting animal waste into the AD facility. Based on this change of plans, the facility no longer is required to complete a 590 Nutrient Management Plan under Chapter 26: Animal Waste Management of the Brown County Code of Ordinances. The facility will complete a waste management plan for land application of industrial waste products under NR213.

A completed waste management plan will be submitted for review and approval by Tom Tewes- WDNR Industrial Wastewater Specialist prior to any land application of industrial waste from the N.E.W. Organic Digestion Facility.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Jennifer L. Keuning, M.S.

JK/rs/1

cc: Rob Larsen, N.E.W. Organic Digestion, LLC  
Steve Van Lannen, American Foods Group, LLC  
Andy Wallander, Kewaunee County LWCD  
Jerry Halverson, Manitowoc County SWCD

Equal  
Employment  
Opportunity Employer

### GRANT APPLICATION REVIEW

Department: Land and Water Cons. Preparer: Bill Hafz Date: 12/17/09

Grant Title: Great Lakes Restoration Initiative Grantor Agency: EPA/USDA

Grant Period: 2010 to 2011 Grant # (if applicable): \_\_\_\_\_

Brief description of activities/items proposed under grant:

Agricultural Best Management Practice implementation in Lower Fox River Total Maximum Daily Load in high sediment and phosphorus delivery subwatersheds in Brown, Outagamie and Calumet County's. Total Grant for Brown, Outagamie, and Calumet County is \$10,787,700 per year. Brown County portion is \$5,349,000 per year including \$594,000 (8.25 fte), \$120,000 (staff support costs), \$4,635,000 (cost share for landowners). Balance of grant would be distributed to Outagamie and Calumet County Land and Water Conservation Departments.

Total Grant Amount: \$ 10,787,700 Yearly Grant Amount: \$ — Term of Grant: 2010 - 2011

Is this a new grant or a continuation of an existing grant?  New  Continuation

If a continuation, how long have we received the grant? N/A

Are the activities proposed under the grant mandated or statutorily required?  Yes  No

Will the grant fund new or existing positions?  Yes  No If yes, explain:  
new positions would be 100% funded by grant

Are matching resources required?  Yes  No If so, what is the amount of the match \$ \_\_\_\_\_  
How will it be met? Brown County will however point to current funding from State and County to enhance grant.

Explain any ongoing cost to be assumed by the Cnty (ie, maint. costs, software licenses, etc.): \_\_\_\_\_  
Existing staff will monitor and inspect Best Management Practices consistent with current County Ordinances

Explain any maintenance of efforts once the grant ends: \_\_\_\_\_  
Existing staff will monitor and inspect Best Management Practices consistent with current County Ordinances

<b>Budget Summary:</b>	Salaries:	<u>Brown County portion only</u>	<u>\$594,000</u>
	Fringe Benefits:		
	Operation and Maintenance:		<u>\$120,000</u>
	Travel/Conference/Training:		
	Contracted Services:		
	Outlay:		
	Other (list):		<u>\$4,635,000</u>
	<b>Total Expenditures:</b>		<u>\$5,349,000</u>
	<b>Total Revenues:</b>		<u>\$5,349,000</u>
	<b>Required County Funds:</b>		<u>0</u>

#### APPROVALS

William C. Hafz  
Signature of Department Head

Lynna VandenLangenberg  
Signature of Director of Administration

Date: 12-17-09

Date: 12/22/09

**Lower Fox Integrated TMDL Implementation:**  
**Agricultural BMP Implementation in Brown County, Outagamie County, Calumet County 11/19/09**

**Project Title:** Agricultural BMP Implementation in Brown County, Outagamie County, Calumet County – Lower Fox River TMDL

**Project Applicant:**

Brown County Land and Water Conservation Department, Outagamie County Land Conservation Department, Calumet County Land and Water Conservation Department – portions will be submitted to EPA and NRCS

**Contact Person:**

Bill Hafs, Brown County Land and Water Conservation Department, 1150 Bellevue Street, Green Bay, WI, 54302, 920-391-4633, fax 391-4617, hafs\_bc@co.brown.wi.us

Greg Baneck, Outagamie County Land Conservation Department, 3365 W. Brewster, St., Appleton, WI, 54914-1602, 920-832-5073, fax 920-832-4783, BaneckGJ@co.outagamie.wi.us

Eugene McLeod, Calumet County Land and Water Conservation Department, 206 Court St., Chilton, WI 53014-1198, 920-849-1444, fax 920-849-1481, mcLeod.eugene@co.calumet.wi.us

**Project Location (please be as specific as possible):**

Lake Michigan Basin

Lower Fox TMDL top yield sub watersheds (total phosphorus & total suspended solids): portions of East River & Apple, Bower, Garners, Plum, & Kankapot Creeks.

**Problem Statement:**

Full restoration of beneficial uses within the Lower Green Bay and Fox River Area of Concern (AOC) depends on implementation of the Lower Fox Total Maximum Daily Load (TMDL) for phosphorus and sediment. Seven of eleven AOC impairments are partially caused by excessive nutrient and sediment loads (e.g. Loss of Fish & Wildlife Habitat and Eutrophication). Reducing phosphorus and sediment inputs were Key Actions #1 and 2 identified in the Remedial Action Plan (WDNR 1988). Today, nonpoint sources continue to dominate loading with agriculture providing 48% of phosphorus and 66% of suspended solids loading to the AOC (Baumgart, TMDL baseline modeling 2009). This impact extends beyond the AOC as the Lower Fox is the largest phosphorus contributor to Lake Michigan (USGS). It should be noted that this area of Wisconsin has the highest concentration of livestock operations greater than 500 animal units in the State. It is estimated that there are 20 livestock operations in this watershed greater than 500 animal units that operate approximately 35,000 – 45,000 acres.

Barriers to reducing agricultural phosphorus and sediment loads are well known. Facilitated discussions with farmers in the Lower Fox noted economics as a limitation when implementing conservation practices (Scheberle & Cooper 2008). Nearly 90% of Lower Fox dairy producers surveyed felt a personal responsibility to protect water quality and nearly 70% would be willing to change practices, but only 14% would pay more to improve water quality (UW-Extension 2008). Wisconsin's Administrative Code NR151 defines agricultural performance standards and prohibitions to protect water quality, yet cost share must be provided before these can be enforced.

This project proposes to implement practices known to be effective at reducing phosphorus and sediment loads from agriculture by removing the economic barrier and bringing their land into compliance with NR151, effectively removing future cost share requirements. Wisconsin's Great Lakes priorities addressed are "Support and implement actions and projects for the TMDL" (p 29) and action plan recommendations for nonpoint pollution including "Promote buffers along all waterways, promote public outreach and the capacity for local governments to address nonpoint source issues, and support implementation of the nutrient and solids TMDL for the Fox River and Lower Green Bay" (p 35 Wisconsin Great Lakes Strategy, DNR 2009). Two EPA "GLRI Action Plan Focus Areas" will be addressed; Areas of Concern by contributing to restoration of nutrient and sediment related Beneficial Uses (p 10) and Nonpoint Source Pollution by reducing annual phosphorus loading, rate of sediment deposition, and possibly acres enrolled in conservation programs managed by NRCS (p 17).

**Proposed Work: 4 year project**

- Agriculture non point implementation will be prioritized in highest loading sub watersheds as identified by UW Green Bay (P.Baumgart 11/09) and begin with livestock producers greater than 500 animal units. The grant will provide necessary staffing resources for three counties needed to implement and monitor BMP's with agriculture producers.
- Outcomes and deliverables resulting from this project will include:
  1. Complete conservation farm plans on 5 livestock operations greater than 500 animal units in first year and 20 during the 4 year grant period.
  2. 21 miles of buffers installed/year.
  3. Monitoring for conservation compliance on 20 operations greater than 500 animal units (in cooperation with DNR). Inspections 6 times per year/ operation.
  4. Installation of 41,500 acres of 590 plans with monitoring included as part of inspections.
  5. Enforcement, inspections, compliance, complaint inspections (50 per year).
  6. Reduce soil phosphorus from average of 42 ppm to 25 ppm by use of nutrient management plans, tipping fees for transport to low phosphorus fields or to a Waste Transformation Plant. (4000 acres per year).
  7. Manure storage facility construction of 50 storage facilities to provide adequate storage over winter.
  8. Create a Clean Water Incentive program which provides dewatering equipment with potential of waste water treatment (per DNR approval) of animal waste to 5 livestock operations greater than 500 animal units.
  9. All conservation best management practices will be consistent with NR151 and be required to be maintained in perpetuity and contracts will be attached to landowner's deed.
- This project would develop a template for future TMDL's using cost – share tied to required agriculture BMP's using NR151 and County Ordinances. The project will also require extensive monitoring of agriculture producers and compliance methodology that can be imitated in future TMDL projects.

**Collaboration with others:**

This project will partner with Wisconsin DNR to coordinate inspections and enforcement actions. The project has used UWGB monitoring and modeling and TMDL process to prioritize watersheds for BMP implementation. This project will take advantage of five years of existing P & TSS watershed monitoring data and information ([www.uwgb.edu/watreshed](http://www.uwgb.edu/watreshed)) when sighting implementation projects. Additionally we will continue collaboration with UW-Green Bay personnel to establish post-implementation monitoring at various spatial scales to document change. The project will rely on the UW-Extension Basin Educator for Natural Resources for the Lower Fox River and Upper Green Bay Basins and the TMDL outreach committee to provide educational outreach. The project will use NRCS standards and engineering support for BMP's. The project will rely on DNR for review and approval of waste water systems installed through DNR WPDES process.

**Describe what existing plan(s) this work will forward the goals of:**

Seven of eleven AOC impairments are at least partially caused by excessive nutrient and sediment loads (e.g. Loss of Fish & Wildlife Habitat, Degraded Fish & Wildlife Populations, and Eutrophication/Undesirable Algae). Reducing phosphorus and sediment inputs to the AOC were Key Actions #1 and 2 identified in the Remedial Action Plan (WDNR 1988). This will advance Wisconsin's Great Lakes priorities in the AOC of "Support and implement actions and projects for the TMDL"

**Project Cost:**

**Staffing per year**

Brown County	8.25	\$594,000
Outagamie County	6.75	\$437,000
Calumet County	1.25	\$77,000
<b>Total staffing cost/yr</b>	<b>16.25</b>	<b>\$1,108,000</b>

**Staff Support Costs** (Computers, vehicles, supplies)

Brown County	\$120,000 start up (\$10,000 annual after startup)
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Outagamie County	\$113,500 start up (\$10,000 annual after startup)
Calumet County	\$ 8,500 startup (\$1000 annual after startup)
Outreach (mailings/brochures)	\$3,000
<b>Total Staff Support Costs</b>	<b>\$245,000</b>

<u>Cost share per year</u>	<u>Brown Co.</u>	<u>Outagamie Co.</u>	<u>Calumet County</u>
Buffer strips	\$0	\$1,268,000	\$126,700
Manure Storage	\$1,815,000	\$1,189,000	\$0
Water and Sediment basins	\$40,000	\$27,000	\$9,000
Nutrient Management	\$280,000	\$280,000	\$0
Tipping fees Phosphorus	\$1,000,000	\$675,000	\$225,000
Clean Water Incentive	\$1,500,000	\$1,000,000	\$0
<b>Total Cost Share per year</b>	<b>\$4,635,000</b>	<b>\$4,439,000</b>	<b>\$360,700</b>
<b>Grand Total Cost share</b>	<b>\$9,434,700</b>		

**Budget summary**

<b>Total staffing cost/yr (16.25)</b>	<b>\$1,108,000</b>
<b>Total Staff Support Costs</b>	<b>\$242,000</b>
<b>Grand Total Cost share</b>	<b>\$9,434,700</b>
<b>Total Grant proposal/yr</b>	<b>\$10,787,700</b>

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***Project Selection Criteria as outlined in the EPA GLRI Action Plan***

- Ability to strategically achieve measurable environmental outcomes: will be accomplished by additional staffing added for monitoring six times per year per contracted livestock operation. Measurable compliance reports will be required of livestock operation. P & TSS monitoring at implementation sites will be conducted by UW-Green Bay under separate monitoring proposal.
- Ability to advance applicable ecological priorities of Lakewide Management Plans, Remedial Action Plans for Areas of Concern, as well as other relevant national and regional coordinated strategic planning efforts: will be accomplished by focusing implementation in high priority sediment and phosphorus delivery watersheds identified by UWGB and prioritizing work on livestock operations greater than 500 animal units located in the high delivery sub watersheds. Two of the top five high priorities for the Lower Fox River and Green Bay RAP are phosphorus and sediment delivery reduction which will be monitored at sites thru collaboration with the UW-Green Bay Watershed Monitoring Program under separate proposal.
- Feasibility of prompt implementation, including a bias for projects that are both ready-to go and will have results soon (however, some funding will be used for planning and design to ensure cost effective implementation and for monitoring, particularly where it is needed to establish baseline conditions and/or to better understand environmental problems to inform implementation actions). Implementation will be a factor of hiring staff to accelerate existing efforts to gain compliance with state NR151 administrative code, County Ordinances for Animal Waste Management, Buffer Strip installation, and objectives outlined by TMDL technical advisory committee.
- Observable local impacts, especially for projects at the field level. Tracking of conservation practices will be tracked on GIS tuff book computers using software already developed by Outagamie County. Monitoring and inspections of livestock operation BMP's will be tracked on Data Base on Tuff book consistent with NR151 administrative rules. Nutrient management plans will track soil phosphorus ppm on GIS data base (see bullet points one and two above regarding P and TSS monitoring by UWGB).
- Strong bias for inter-agency/inter-organizational coordination and collaboration. Brown County, Outagamie County, Calumet County, DNR, UWGB, Brown County UWEX, Members of TMDL technical advisory committee, and TMDL outreach committee all worked in concert to develop this proposal
- Support new work, or enhance (but do not replace) existing Great Lakes base activities. This project would be the first project to target the highest loading phosphorus and sediment loading sub watersheds, the largest livestock operations and utilize NR151 administrative codes to require Ag BMP implementation if cost share is offered to the livestock operation. This project also places a high emphasis on continued monitoring and inspections of livestock operations contracted through this project. All projects are

contracted to be maintained in perpetuity. The Project also offers a new Clean Water Incentive program where the livestock operation is offered a one time \$500,000 payment to install animal waste dewatering equipment and water treatment equipment that satisfies DNR WPDES waste water discharge limits. All other conservation practices such as Buffers, Nutrient Management, and Sediment control have to be maintained in perpetuity by livestock operation as a condition of this Clean Water Incentive program.

- Public support Public support for this project is consistent with the Area of Concern Remedial Action Plan which calls for reduced sediment and phosphorus loading to Lower Fox River and Green Bay.
- Ability to leverage non-Federal resources. Management of this project, office space, and educational outreach involves the time and commitment of Brown County, Outagamie County, Calumet County, UWEX, UWGB, UW-Extension Basin Educator for Natural Resources, TMDL technical and outreach committees.
- Promotion of long-term societal, economic, and environmental sustainability. The work proposed in this project will lead to long term sustainability of agriculture and water quality. Currently there are more livestock operations in this watershed than any other location in Wisconsin. These livestock numbers combined with diminishing cropland due to urban sprawl have created an unsustainable situation that causes water quality problems. The BMP's identified and the monitoring and inspection program outlined will lead to sustainable livestock operations where there is adequate land to land apply animal waste, tipping fees are provided to transport nutrients to low nutrient crop fields and waste water treatment systems are installed on large livestock operations thereby treating them similar to cities.
- Minimization of transaction costs This project prioritizes both the sub watersheds that have the highest yield and diverts resources to the largest livestock operations in those sub watersheds to maximize cost effectiveness.

**Legend**

**Monitoring Stations**

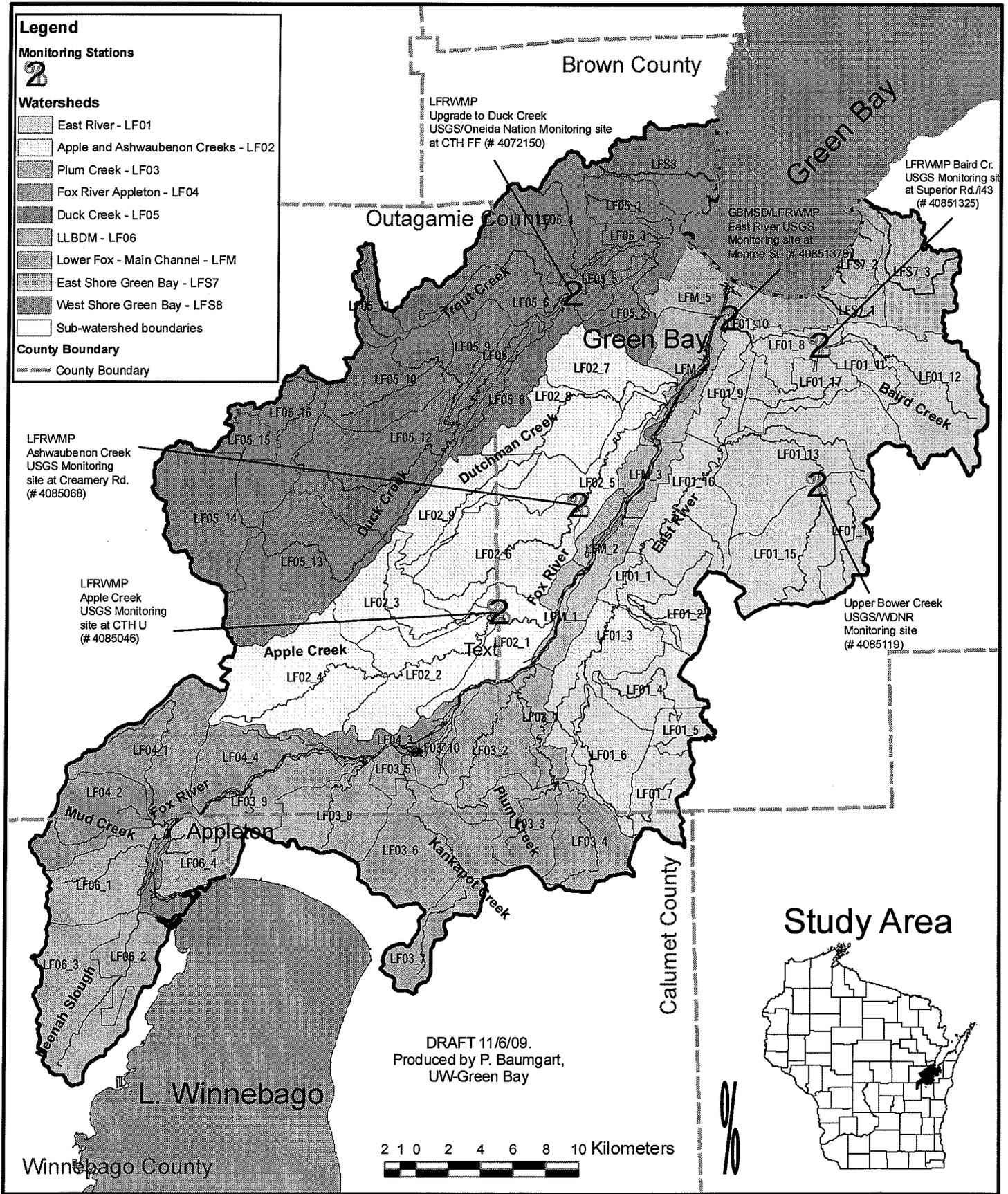


**Watersheds**

- East River - LF01
- Apple and Ashwaubenon Creeks - LF02
- Plum Creek - LF03
- Fox River Appleton - LF04
- Duck Creek - LF05
- LLBDM - LF06
- Lower Fox - Main Channel - LFM
- East Shore Green Bay - LFS7
- West Shore Green Bay - LFS8
- Sub-watershed boundaries

**County Boundary**

- County Boundary



LFRWMP  
Upgrade to Duck Creek  
USGS/Oneida Nation Monitoring site  
at CTH FF (# 4072150)

GBMSDLFRWMP  
East River USGS  
Monitoring site at  
Monroe St. (# 40851378)

LFRWMP Baird Cr.  
USGS Monitoring site  
at Superior Rd./43  
(# 40851325)

LFRWMP  
Ashwaubenon Creek  
USGS Monitoring  
site at Creamery Rd.  
(# 4085068)

LFRWMP  
Apple Creek  
USGS Monitoring  
site at CTH U  
(# 4085048)

Upper Bower Creek  
USGS/VDNR  
Monitoring site  
(# 4085119)

**Study Area**



DRAFT 11/6/09.  
Produced by P. Baumgart,  
UW-Green Bay



SWAT simulated loads and yields at sub-watershed outlets: 2004 Baseline conditions

| SWAT_id  | AG TP      |             | AG TP-yield |             | AG TSS     |               | AG TSS-yield |        | AG Area     |             | Total Stream Length |            | Sub-watershed |               | TP |       | Sorted BY TP-yield |               | TSS    |        | TSS-yield |       | Area       |               | Sorted BY TP-yield |        |    |       |            |               |        |
|----------|------------|-------------|-------------|-------------|------------|---------------|--------------|--------|-------------|-------------|---------------------|------------|---------------|---------------|----|-------|--------------------|---------------|--------|--------|-----------|-------|------------|---------------|--------------------|--------|----|-------|------------|---------------|--------|
|          | kg         | kg/ha       | kg/ha       | kg/ha       | metric ton | metric ton/ha | sq. km       | sq. km | km          | km          | kg                  | kg/ha      | metric ton    | metric ton/ha | kg | kg/ha | metric ton         | metric ton/ha | sq. km | sq. km | kg        | kg/ha | metric ton | metric ton/ha | sq. km             | sq. km | kg | kg/ha | metric ton | metric ton/ha | sq. km |
| LF010100 | 1208.54463 | 1.56935587  | 507.478584  | 0.658986414 | 7.700896   | 26.62391913   | LF01-2       | 1589.3 | 2.068177523 | 747.420877  | 0.972621884         | 7.6845986  | 1             |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF010200 | 1589.31141 | 2.068177523 | 747.420877  | 0.972621884 | 7.6845986  | 26.17212342   | LF03-2       | 5575.1 | 1.994218487 | 2427.963651 | 0.868478374         | 27.956524  | 2             |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF010300 | 3806.99347 | 1.50997357  | 1366.160817 | 0.541862428 | 25.2123186 | 70.72907372   | LF03-1       | 1214   | 1.954883267 | 589.51743   | 0.9492698           | 6.21022    | 3             |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF010400 | 2030.14326 | 1.662252831 | 921.208375  | 0.754272499 | 12.2132038 | 43.10473307   | LF03-7       | 2066.7 | 1.883828929 | 800.527958  | 0.729698197         | 10.970672  | 4             |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF010500 | 548.844807 | 1.166299119 | 142.829629  | 0.303513978 | 4.7058666  | 11.12803919   | LF01-16      | 2860.7 | 1.756985654 | 1295.385423 | 0.795596436         | 16.281941  | 5             |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF010600 | 2931.37371 | 1.67986102  | 1218.991303 | 0.698558484 | 17.4500966 | 56.08664065   | LF03-3       | 2821.9 | 1.698598919 | 1035.372012 | 0.623229483         | 16.613014  | 6             |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF010700 | 1680.84191 | 1.496748893 | 597.50082   | 0.532059966 | 11.2299526 | 18.43781775   | LF01-6       | 2931.4 | 1.67986102  | 1218.991303 | 0.698558484         | 17.4500966 | 7             |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF010800 | 99.572504  | 2.053051479 | 37.237338   | 0.767783964 | 0.4849976  | 8.346715422   | LF03-6       | 5841   | 1.671313707 | 2030.882981 | 0.581101552         | 34.948848  | 8             |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF010900 | 128.187962 | 1.007747428 | 28.611479   | 0.224928643 | 1.2720247  | 13.85432799   | LF01-4       | 2030.1 | 1.662252831 | 921.208375  | 0.754272499         | 12.2132038 | 9             |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF011000 | 0.118699   | 1.031896027 | 0.021131    | 0.183699904 | 0.0011503  | 0.206308597   | LFM1-1       | 881.38 | 1.656079459 | 305.887912  | 0.574751634         | 5.3220886  | 10            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF011100 | 541.979489 | 1.213706646 | 163.727663  | 0.366651057 | 4.46549    | 6.850240709   | LF01-15      | 4811.4 | 1.84394122  | 1822.957474 | 0.622823985         | 29.269224  | 11            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF011200 | 3452.08385 | 1.151100418 | 770.950679  | 0.257074187 | 29.989424  | 69.95104014   | LF01-14      | 2461.5 | 1.609833178 | 898.806045  | 0.587829506         | 15.2902506 | 12            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF011300 | 3132.94567 | 1.262764673 | 1131.155406 | 0.45592335  | 24.81021   | 82.54230445   | LF02-2       | 3198.9 | 1.595501474 | 1133.638111 | 0.565412986         | 20.049736  | 13            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF011400 | 2461.47527 | 1.609833178 | 898.806045  | 0.587829506 | 15.2902506 | 24.48952119   | LF01-1       | 1208.5 | 1.569955687 | 507.478584  | 0.658986414         | 7.700896   | 14            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF011500 | 4811.39569 | 1.64384122  | 1822.957474 | 0.622823985 | 29.269224  | 53.67641112   | LF02-4       | 4237.3 | 1.549298535 | 1612.644559 | 0.589638977         | 27.349694  | 15            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF011600 | 2860.71368 | 1.756985654 | 1295.385423 | 0.795596436 | 16.281941  | 62.89933966   | LF03-4       | 3008.6 | 1.537946024 | 1045.071386 | 0.534223488         | 19.562438  | 16            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF011700 | 461.787395 | 1.292072749 | 145.505404  | 0.407121479 | 3.5740046  | 16.81828771   | LF04-2       | 1662   | 1.537729962 | 687.352939  | 0.635967408         | 10.80799   | 17            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF020100 | 1816.11247 | 1.370980783 | 661.764891  | 0.499565399 | 13.246812  | 29.95443698   | LF01-3       | 3807   | 1.50997357  | 1366.160817 | 0.941862428         | 25.2123186 | 18            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF020200 | 3198.93833 | 1.595501474 | 1133.638111 | 0.565412986 | 20.049736  | 53.08627786   | LF01-7       | 1680.8 | 1.496748893 | 597.50082   | 0.532059966         | 11.2299526 | 19            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF020300 | 3122.02014 | 1.370669417 | 879.913533  | 0.386310951 | 22.7773386 | 34.83875272   | LF06-1       | 1055.7 | 1.469982223 | 381.193636  | 0.530788486         | 7.18169    | 20            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF020400 | 4237.28408 | 1.549298535 | 1612.644559 | 0.589638977 | 27.349694  | 86.14994382   | LF03-8       | 1317.1 | 1.442653293 | 447.652632  | 0.490318372         | 9.129896   | 21            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF020500 | 1131.93927 | 1.113187185 | 340.571324  | 0.334929306 | 10.168454  | 39.76623857   | LF04-1       | 853.64 | 1.431663542 | 306.928491  | 0.514760241         | 5.9625524  | 22            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF020600 | 4434.59853 | 1.224269119 | 1275.104876 | 0.352020935 | 36.222416  | 69.06731261   | LF06-3       | 3549.1 | 1.420800471 | 1212.35448  | 0.485331999         | 24.9799    | 23            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF020700 | 221.17884  | 1.04629088  | 63.913891   | 0.302345926 | 2.1139326  | 20.04614789   | LF05-13      | 5412.1 | 1.392742125 | 2528.971929 | 0.650801565         | 38.85934   | 24            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF020800 | 1696.14361 | 1.16987943  | 500.302153  | 0.345072902 | 14.498448  | 32.12456894   | LF02-1       | 1816.1 | 1.370980783 | 661.764892  | 0.499565399         | 13.246812  | 25            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF020900 | 2876.62222 | 1.182858677 | 737.882958  | 0.326086733 | 22.6284194 | 35.61922071   | LF02-3       | 3122   | 1.370669417 | 879.913533  | 0.386310951         | 22.7773386 | 26            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF030100 | 1213.96995 | 1.954837267 | 589.51743   | 0.9492698   | 6.21022    | 23.71150862   | LFM1-2       | 1030.7 | 1.369916688 | 359.712404  | 0.478108394         | 7.523658   | 27            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF030200 | 5575.1417  | 1.994218487 | 2427.963651 | 0.868478374 | 27.956524  | 52.72845893   | LF05-16      | 1733.8 | 1.288274695 | 714.397164  | 0.530833386         | 13.45803   | 28            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF030300 | 2821.88476 | 1.698598919 | 1035.372012 | 0.623229483 | 16.613014  | 34.46540205   | LF01-13      | 3132.9 | 1.262764673 | 1131.155406 | 0.45592335          | 24.81021   | 29            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF030400 | 3008.59737 | 1.537946024 | 1045.071386 | 0.534223488 | 19.562438  | 40.70835261   | LF02-6       | 4434.6 | 1.224269119 | 1275.104876 | 0.352020935         | 36.222416  | 30            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF030500 | 20.722721  | 2.472067162 | 8.470511    | 1.010469237 | 0.0838275  | 6.859639985   | LF05-14      | 4563.5 | 1.216288283 | 1927.068505 | 0.513615389         | 37.51968   | 31            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF030600 | 5841.04687 | 1.671313707 | 2030.882981 | 0.581101552 | 34.948848  | 63.50648104   | LF02-9       | 2676.6 | 1.182858677 | 737.882736  | 0.326086733         | 22.6284194 | 32            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF030700 | 2066.68693 | 1.883828929 | 800.527958  | 0.729698197 | 10.970672  | 15.99409804   | LF02-8       | 1696.1 | 1.169897943 | 500.302153  | 0.345072902         | 14.498448  | 33            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF030800 | 1317.1188  | 1.442653293 | 447.652632  | 0.490318372 | 9.129896   | 41.37175108   | LFST-3       | 2202.5 | 1.16149476  | 536.987506  | 0.283182873         | 18.96257   | 34            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF030900 | 0.739534   | 2.023325388 | 0.257057    | 0.704246459 | 0.0036501  | 16.09807636   | LF01-12      | 3452.1 | 1.15100418  | 770.950679  | 0.257074187         | 29.989424  | 35            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF031000 | 571.086676 | 2.143062642 | 277.475981  | 1.041257718 | 2.6648156  | 14.10212809   | LF02-5       | 1131.9 | 1.113187185 | 340.571324  | 0.334929306         | 10.168454  | 36            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF040100 | 853.636889 | 1.431663542 | 306.928491  | 0.514760241 | 5.9625524  | 51.24297647   | LF05-8       | 1218.1 | 1.087533534 | 500.998738  | 0.447314047         | 11.2001566 | 37            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |
| LF040200 | 1661.97701 | 1.537729962 | 687.352939  | 0.635967408 | 10.80799   | 38.00133288   | LF05-12      | 3558.8 | 0.966853707 | 1445.667398 | 0.392756992         | 36.80819   | 38            |               |    |       |                    |               |        |        |           |       |            |               |                    |        |    |       |            |               |        |

|             |         |            |             |             |             |            |             |         |        |              |            |              |           |
|-------------|---------|------------|-------------|-------------|-------------|------------|-------------|---------|--------|--------------|------------|--------------|-----------|
| LF040300    | LF04-3  | 179.779932 | 1.78849948  | 70.264813   | 0.6990134   | 1.0051998  | 5.107219059 | LF05-10 | 2429   | 0.944761599  | 779.508484 | 0.303187225  | 25.710466 |
| LF040400    | LF04-4  | 150.371057 | 1.876841718 | 57.660424   | 0.719682972 | 0.801192   | 18.33745608 | LF05-6  | 1483.5 | 0.800388638  | 555.167785 | 0.299526064  | 18.534874 |
| LF050100    | LF05-1  | 321.12206  | 1.231869194 | 102.026694  | 0.391388687 | 2.606787   | 22.23398839 | LF05-4  | 833.98 | 0.835502236  | 312.36348  | 0.312933018  | 9.9818    |
| LF050200    | LF05-2  | 6.538579   | 0.883618812 | 2.575375    | 0.348140793 | 0.0739751  | 12.40934721 | LF05-9  | 795.43 | 1.000776397  | 307.565119 | 0.3866963535 | 7.948168  |
| LF050300    | LF05-3  | 11.071466  | 0.982165108 | 4.876078    | 0.432563644 | 0.1127251  | 4.22623191  | LF05-11 | 785.38 | 0.924844132  | 277.174328 | 0.32639241   | 8.492058  |
| LF050400    | LF05-4  | 833.981622 | 0.835502236 | 312.36348   | 0.312933018 | 9.9818     | 37.31012733 | LF05-7  | 645.84 | 1.726005572  | 311.311682 | 0.83197802   | 3.7418258 |
| LF050500    | LF05-5  | 67.774456  | 1.222816909 | 27.236549   | 0.491413943 | 0.5542486  | 17.53927886 | LF05-7  | 622.58 | 1.445411891  | 434.72974  | 1.009285113  | 4.3073036 |
| LF050600    | LF05-6  | 1483.47319 | 0.800368638 | 555.167785  | 0.299526064 | 18.534874  | 57.5779893  | LF05-10 | 571.09 | 2.143062842  | 277.475981 | 1.041257718  | 2.6648156 |
| LF050700    | LF05-7  | 622.582784 | 1.445411891 | 434.72974   | 1.009285113 | 4.3073036  | 21.86258498 | LF01-5  | 548.84 | 1.1662299119 | 142.829629 | 0.303513978  | 4.7058666 |
| LF050800    | LF05-8  | 1218.09459 | 1.087533534 | 500.998738  | 0.447314047 | 11.2001566 | 24.0272177  | LF01-11 | 541.98 | 1.213706646  | 163.727663 | 0.366651057  | 4.46549   |
| LF050900    | LF05-9  | 795.438893 | 1.000776397 | 307.565119  | 0.386963535 | 7.948168   | 20.86923982 | LF01-17 | 491.79 | 1.292072749  | 145.505404 | 0.407121479  | 3.5740046 |
| LF051000    | LF05-10 | 2429.0261  | 0.944761599 | 779.508484  | 0.303187225 | 25.710466  | 39.17703209 | LF05-1  | 390.64 | 1.531690594  | 156.326908 | 0.612960843  | 2.550358  |
| LF051100    | LF05-11 | 785.383001 | 0.924844132 | 277.174328  | 0.32639241  | 8.492058   | 10.41960705 | LF05-1  | 321.12 | 1.231869194  | 102.026694 | 0.391388687  | 2.606787  |
| LF051200    | LF05-12 | 3558.8135  | 0.966853707 | 1445.667398 | 0.392756992 | 36.80819   | 77.02849528 | LF05-1  | 240.14 | 0.662431817  | 40.837597  | 0.112649983  | 3.6251756 |
| LF051300    | LF05-13 | 5412.10398 | 1.392742125 | 2528.971929 | 0.650801565 | 38.85934   | 65.52479228 | LF02-7  | 221.18 | 1.04629098   | 63.913891  | 0.302345926  | 2.1139326 |
| LF051400    | LF05-14 | 4563.47472 | 1.216288283 | 1927.068505 | 0.513615389 | 37.51968   | 61.37404878 | LF01-3  | 180.67 | 1.462401038  | 70.706736  | 0.5723187    | 1.2354434 |
| LF051500    | LF05-15 | 10.861619  | 1.131129972 | 2.356065    | 0.245360819 | 0.0960245  | 4.546232122 | LF04-3  | 179.78 | 1.78849948   | 70.264813  | 0.6990134    | 1.0051998 |
| LF051600    | LF05-16 | 1733.76395 | 1.288274695 | 714.397164  | 0.530833386 | 13.45803   | 16.21132422 | LF04-4  | 150.37 | 1.876841718  | 57.660424  | 0.719682972  | 0.801192  |
| LF060100    | LF06-1  | 1055.69566 | 1.469982223 | 381.195836  | 0.530788486 | 7.18169    | 23.62843682 | LF01-9  | 128.19 | 1.007747428  | 28.611479  | 0.224928643  | 1.2720247 |
| LF060200    | LF06-2  | 85.474501  | 1.636888138 | 21.553679   | 0.412765925 | 0.5221768  | 13.53850793 | LF01-8  | 99.573 | 2.053051479  | 37.237338  | 0.767783964  | 0.4849976 |
| LF060300    | LF06-3  | 3549.14537 | 1.420800471 | 1212.35448  | 0.485331999 | 24.9799    | 38.46122626 | LF06-2  | 85.475 | 1.636888138  | 21.553679  | 0.412765925  | 0.5221768 |
| LF060400    | LF06-4  | 4.403732   | 1.38591966  | 1.122433    | 0.353246283 | 0.0317748  | 10.10675342 | LF05-5  | 67.774 | 1.222816909  | 27.236549  | 0.491413943  | 0.5542486 |
| LFM10100    | LFM1-1  | 881.380161 | 1.656079459 | 305.887912  | 0.574751634 | 5.3220886  | 16.27194775 | LFM1-5  | 50.174 | 1.84414374   | 19.647825  | 0.722155083  | 0.2720721 |
| LFM10200    | LFM1-2  | 1030.67847 | 1.369916688 | 359.712404  | 0.478108394 | 7.523658   | 23.55033449 | LFM1-4  | 36.327 | 1.767307068  | 11.449539  | 0.557024803  | 0.2055481 |
| LFM10300    | LFM1-3  | 180.671371 | 1.462401038 | 70.706736   | 0.5723187   | 1.2354434  | 4.178789095 | LF03-5  | 20.723 | 2.472067162  | 8.470511   | 1.010469237  | 0.0838275 |
| LFM10400    | LFM1-4  | 36.326661  | 1.767307068 | 11.449539   | 0.557024803 | 0.2055481  | 11.41116632 | LF05-3  | 11.071 | 0.982165108  | 4.876078   | 0.432563644  | 0.1127251 |
| LFM10500    | LFM1-5  | 50.174006  | 1.84414374  | 19.647825   | 0.722155083 | 0.2720721  | 7.777663864 | LF05-15 | 10.862 | 1.131129972  | 2.356065   | 0.245360819  | 0.0960245 |
| LFS70100    | LFS7-1  | 390.635936 | 1.531690594 | 156.326908  | 0.612960643 | 2.550358   | 6.573622654 | LF05-2  | 6.5366 | 0.883618812  | 2.575375   | 0.348140793  | 0.0739751 |
| LFS70200    | LFS7-2  | 645.841218 | 1.726005572 | 311.311682  | 0.83197802  | 3.7418258  | 6.318528642 | LF06-4  | 4.4037 | 1.38591966   | 1.122433   | 0.353246283  | 0.0317748 |
| LFS70300    | LFS7-3  | 2202.49257 | 1.16149476  | 536.987506  | 0.283182873 | 18.96257   | 38.98732696 | LF03-9  | 0.7385 | 2.023325388  | 0.257057   | 0.704246459  | 0.0036501 |
| LFS80100    | LFS8-1  | 240.143166 | 0.662431817 | 40.837597   | 0.112649983 | 3.6251756  | 18.13347832 | LF01-10 | 0.1187 | 1.031896027  | 0.021131   | 0.183699904  | 0.0011503 |
| Grand Total | TOTAL   | 113770.459 | 1.387732688 | 42138.86075 | 0.513995239 | 819.829787 |             |         |        |              |            |              |           |

### GRANT APPLICATION REVIEW

Department: Land and Water Cons. Preparer: Bill Hafs Date: 12/17/09

Grant Title: Great Lakes Restoration Initiative Baird Grantor Agency: EPA

Grant Period: 2010 to 2011 Grant # (if applicable): \_\_\_\_\_

Brief description of activities/items proposed under grant:

In Baird Creek Watershed, protect stream corridors and create riparian corridor habitat. Establish buffer strips on all steams located in sections 5, 4, and 8 of the Town of Humboldt estimated to be 6 miles at 35 feet wide on both sides of the stream. Financial incentives would be offered up toe \$2,500 per acre for landowners to install buffer strips out to 150 feet on both sides of a stream by permanent contract attached to landowners deed. \$133,700 will be provided in cost share to landowners, \$211,654 in staffing cost to Brown County Land and Water Conservation Department and Baird Creek Parkway Preservation Foundation, and \$32,000 O&M.

Total Grant Amount: \$ \$377,354 Yearly Grant Amount: \$ 377,354 Term of Grant: 2010-2011

Is this a new grant or a continuation of an existing grant?  New  Continuation

If a continuation, how long have we received the grant? \_\_\_\_\_

Are the activities proposed under the grant mandated or statutorily required?  Yes  No

Will the grant fund new or existing positions?  Yes  No If yes, explain:  
one project technician for 2 years and 500 hrs for management of project.

Are matching resources required?  Yes  No If so, what is the amount of the match \$ \_\_\_\_\_  
How will it be met? While matching resources are not required, the grant will point to current efforts by Brown Co.

Explain any ongoing cost to be assumed by the Cnty (ie, maint. costs, software licenses, etc.): \_\_\_\_\_  
Maintenance and inspection of Buffer Strip Ordinance compliance beyond the grant period

Explain any maintenance of efforts once the grant ends: \_\_\_\_\_  
Maintenance and inspection of Buffer Strip Ordinance compliance beyond the grant period

|                        |                               |                  |
|------------------------|-------------------------------|------------------|
| <b>Budget Summary:</b> | Salaries:                     | <u>\$211,654</u> |
|                        | Fringe Benefits:              | _____            |
|                        | Operation and Maintenance:    | <u>\$32,000</u>  |
|                        | Travel/Conference/Training:   | _____            |
|                        | Contracted Services:          | _____            |
|                        | Outlay:                       | _____            |
|                        | Other (list):                 | <u>\$133,700</u> |
|                        | <b>Total Expenditures:</b>    | <u>\$377,354</u> |
|                        | <b>Total Revenues:</b>        | <u>\$377,354</u> |
|                        | <b>Required County Funds:</b> | <u>0</u>         |

#### APPROVALS

William C. Hafs  
Signature of Department Head

Lynn A. VanderLinden  
Signature of Director of Administration

Date: 12-17-09

Date: 12/22/09

# Great Lakes Restoration Initiative Project

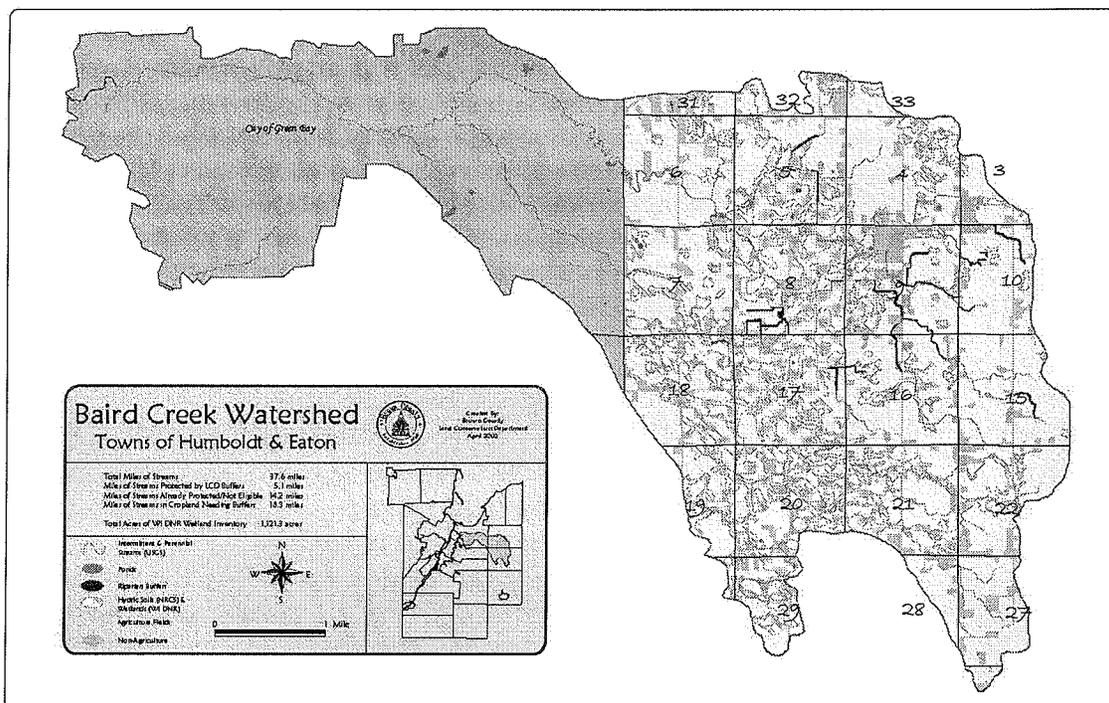
## Baird Creek Riparian Protection Project

### Scope of Work:

Our intent in this project is to protect stream corridors and create riparian corridor habitat. The project will also strive to enhance and protect critical wetland habitat in an area of Northeast Wisconsin that contains one of the highest remaining blocks of wetlands. Much of this work will reduce agriculture nutrient, sediment and pesticide loading to Baird Creek and ultimately the Bay of Green Bay through buffer filtering. Water chemistry data collected by a DNR study (Pesticide sampling study East River 2002 James Reyburn) concluded the Baird Sub watershed is severely impacted by agricultural nonpoint nutrient loading. Wetland restoration work will strive to reconnect wetlands that have been isolated from the drainage system because of agriculture activities which will promote increased waterfowl, fisheries and amphibian numbers. We will cooperate and partner with the Baird Creek Parkway Preservation Foundation to promote the importance of the project on both, local, and state water quality goals. We will continue to work to educate local government officials and citizens regarding the simplicity and effectiveness of vegetative buffers in protecting streams and will encourage adopt a stream and stream monitoring by private citizens of the Baird Creek Parkway Preservation Foundation.

### Work Products for 2010-11:

- Establish vegetated riparian buffers on intermittent and perennial streams throughout the entire watershed area which have been highly degraded by Agricultural activities which results in sediment and nutrient related problems downstream in the Baird Creek Park way and the Lower Fox River and Green Bay Area of Concern.
- Establish/restore/protect buffer strips on **all** streams located in sections 5, 4, and 8 of the town of Humboldt estimated to be 6 miles at 35 feet wide on both sides of the stream. This would continue buffer installation success began in 2009 when buffer agreements were secured on all streams in section 6 of Humboldt to be installed in the spring/ summer of 2010. It would also connect buffer installation accomplished in previous years in sections 8 and 9.



- Buffer strips would be required per Brown County Ordinance at 35 feet per side of stream free of row crops. This project would offer \$2500 per acre to landowners to install buffers out to distances of 150 feet on a permanent contract attached to the landowner's deed.
- The project would have a goal of increased public awareness of the high importance of using buffer strips to protect streambank and wetlands and the impact this project has on the overall water quality of the Bay.
- The project would reestablish stream corridor connectivity to critical habitats to promote overall health of the Bay.
- The project would activate stream monitoring by volunteers (adopt a stream program) with Baird Creek Parkway Preservation Foundation members and Brown County Land and Water Conservation Department Staff for regular scheduled monitoring and compliance.
- Permanent buffer signs will be used to identify agriculture setbacks also increasing public awareness of the need to reestablish stream buffers, wetland protection and stream connectivity to critical habitats.
- Mowing is required initially to control invasive species and improving stand density.
- All buffers permanently recorded on GIS data base with Tuff book.

**Incentive package:**

- |                                   |                 |
|-----------------------------------|-----------------|
| • Riparian Buffers 35-150 ft      | \$2500/acre     |
| • Critical Area Planting          | \$1300/acre     |
| • Wetland Restoration/Enhancement | \$1500/acre     |
| • Culvert Removal/Replacement     | 100% cost share |
| • Construction costs              | 70% cost share  |

**Project Budget (Brown County/ Baird Creek Parkway Foundation 2 years)**

Project Coordination:

|                                                                 |           |
|-----------------------------------------------------------------|-----------|
| 500hrs for Baird Creek Foundation, 500hrs for Brown County LWCD | \$74,610  |
| 1 - Project Technician (full time 2080hrs/yr for 2 years)       | \$137,044 |
| 1 Tuff Book Computer with GIS capability                        | \$5,000   |
| 1 Vehicle (including gas & maintenance)                         | \$20,000  |
| Outreach & Educational expense                                  | \$7,000   |

Cost Sharing to Landowners:

|                                                                |          |
|----------------------------------------------------------------|----------|
| • 7 miles of buffers @ 35 feet wide/side (estimated 59 acres)  | \$0      |
| • 1 mile of buffer at average of 100 feet wide/side (24 acres) | \$60,000 |
| • 29 acres Critical Area Planting (@ \$1300/acre)              | \$37,700 |
| • 5 acres Wetland restoration/enhancement                      | \$6000   |
| • Construction costs                                           | \$30,000 |

**Total:** **\$377,354**

### GRANT APPLICATION REVIEW

Department: Land & Water Cons. Preparer: Bill Hafs Date: 12/17/09

Grant Title: Great Lakes Rest. Initiative West Shore Grantor Agency: US Fish and Wildlife

Grant Period: 2010 to 2014 Grant # (if applicable): \_\_\_\_\_

Brief description of activities/items proposed under grant:

Create, enhance or restore high quality spawning and rearing habitat for northern pike in western rim of Green Bay on private lands. Establish 16 miles of buffers, establish and restore 73 acres of wetlands, reposition 20 culverts to open access to additional 40 miles of stream for migrating fish. Encourage local governments to enact ordinances to protect vegetative buffers.  
\$1,794,866 is total grant request from GLRI; Total Non Federal match (NRDA \$200,000, Brown County existing staff \$60,900)

Total Grant Amount: \$ 1,794,866 Yearly Grant Amount: \$ 448,716 Term of Grant: 2010-2014

Is this a new grant or a continuation of an existing grant?  New  Continuation

If a continuation, how long have we received the grant? \_\_\_\_\_

Are the activities proposed under the grant mandated or statutorily required?  Yes  No

Will the grant fund new or existing positions?  Yes  No If yes, explain:

One project coordinator and 2 technicians (new & existing - match)

Are matching resources required?  Yes  No If so, what is the amount of the match \$ \_\_\_\_\_

How will it be met? Brown County is identifying match to help grant (existing staff time, NRDA funds)

Explain any ongoing cost to be assumed by the Cnty (ie, maint. costs, software licenses, etc.): \_\_\_\_\_

Brown County will monitor contracts for compliance with landowners.

Explain any maintenance of efforts once the grant ends: \_\_\_\_\_

Brown County will monitor contracts for compliance with landowners.

|                        |                                         |                    |
|------------------------|-----------------------------------------|--------------------|
| <b>Budget Summary:</b> | Salaries:                               | <u>\$714,066</u>   |
|                        | Fringe Benefits:                        | _____              |
|                        | Operation and Maintenance:              | <u>\$97,700</u>    |
|                        | Travel/Conference/Training:             | _____              |
|                        | Contracted Services:                    | _____              |
|                        | Outlay:                                 | _____              |
|                        | Other (list): <u>cost to landowners</u> | <u>\$983,100</u>   |
|                        | <b>Total Expenditures:</b>              | <u>\$1,794,866</u> |
|                        | <b>Total Revenues:</b>                  | <u>\$1,794,866</u> |
|                        | <b>Required County Funds:</b>           | <u>0</u>           |

#### APPROVALS

William C. Hafs  
Signature of Department Head

Synda Varden Langenberg  
Signature of Director of Administration

Date: 12-17-09

Date: 12/21/09

**Great Lakes Restoration Initiative –  
Restoration of Northern Pike habitat on private land  
on the western shore of Green Bay, WI  
(Brown & Oconto Counties)**

**ABSTRACT:**

The northern pike (*Esox lucius*) is Wisconsin's second largest predator fish and is an important part of the Green Bay ecosystem and fish community. Northern pike have become scarce in Green Bay due to wetland habitat losses of as high as 70 percent. In addition, fish encounter passage obstacles when leaving Green Bay to find spawning marshes or when fry migrate back to Green Bay.

During 2007, 2008, and 2009, the Brown County Land & Water Conservation Department has been successful in restoring northern pike habitat on private land in the Suamico and Little Suamico watersheds. Employing methods and technologies proven in the Suamico and Little Suamico watersheds, Brown County wishes to transfer its success to other western Green Bay locales in both Brown and Oconto Counties. As before, partnerships with private landowners will be key. Tangential benefits resulting from this project includes increased habitat for waterfowl and amphibian, likely resulting in increased numbers of these species.

**PROJECT GOALS:**

- A. Over 4 years, create, enhance, or restore high-quality spawning and rearing habitat for northern pike in the western rim of Green Bay on private lands. Enhance and protect critical wetland habitat.
- Establish vegetated riparian buffers on approximately 16 miles of intermittent and perennial streams scattered throughout the Suamico, Little Suamico and Pensaukee River Watersheds which have been highly degraded by sediment and nutrients from agricultural runoff.
  - Establish/restore/protect approximately 73 acres of wetlands that are contiguous with intermittent or perennial streams and will benefit northern pike during spawning. (Pooled wetland restoration is critical for pike spawning and rearing success.)
  - Target specific stream segments in which northern pike currently spawn to ensure continued fish propagation. Priority areas are scattered in both Brown and Oconto counties, however, priority will be given to stream/wetland complexes that are within 5 miles of Green Bay as we continue with our strategy to move from the bay inland.
  - Improve access to upstream spawning and rearing habitat sites for adult northern pike by removing/replacing major stream impediments, such as perched culverts. Replace and/or reposition 20 culverts to open access to an additional 40 stream miles for migrating fish.
  - Increase public awareness of the balance that predator species will bring to fisheries and the Green Bay ecosystem. Increase public awareness of the effects of continued wetland loss on the overall water quality of Green Bay and the need to reestablish stream connectivity to critical habitats to promote overall health of Green Bay.
- B. Seek project cooperation, volunteer labor, and possible funding from local and national conservation groups, including The Nature Conservancy and other conservation groups; local and national sportsman groups, including the Brown County Conservation Alliance, Great Lakes Sport Fisherman, Ducks Unlimited, and Trout Unlimited; and local governments in Brown and Oconto Counties.

- C. Educate local elected officials and citizens regarding the simplicity and effectiveness of vegetative buffers in protecting streams.
- D. Encourage local governments to enact ordinances for perpetual protection of vegetative buffers.

**Keys to Landowner Participation and Long-term Habitat Restoration**

As much as possible, out-of-pocket costs to landowners will be kept at a minimum. To accomplish this, this proposal offers 70% cost-sharing for the installation of conservation practices. The 30% landowner match will be provided through a grant to Brown County from the Natural Resources Damage Assessment (NRDA) program.

To ensure protection in perpetuity, landowners are required to sign agreements with their county Land Conservation Departments. Those agreements are recorded at the County Register of Deeds so that future owners are aware that the conservation practices run with the land and must be protected in perpetuity.

**Proposed Cost Share Rates:**

- Culvert Removal/Replacement  
100% cost sharing
- Construction costs 70% cost sharing
- Riparian Buffers (20-150 foot width)  
flat rate of \$2500/acre
- Critical Area Planting  
flat rate of \$1300/acre
- Wetland Restoration/Enhancement  
flat rate of \$1500/acre

**Non Federal Match**

|                              |                                                    |           |
|------------------------------|----------------------------------------------------|-----------|
| NRDA Funds                   | Covers landowner 30% construction costs            | \$180,000 |
|                              | In Stream Monitoring (\$5000/yr/4yrs)              | \$ 20,000 |
| Project Sponsor Contribution | Staff time, vehicle expense, office supplies)/year | \$ 60,900 |
|                              | Total                                              | \$260,900 |

**PROPOSED BUDGET**

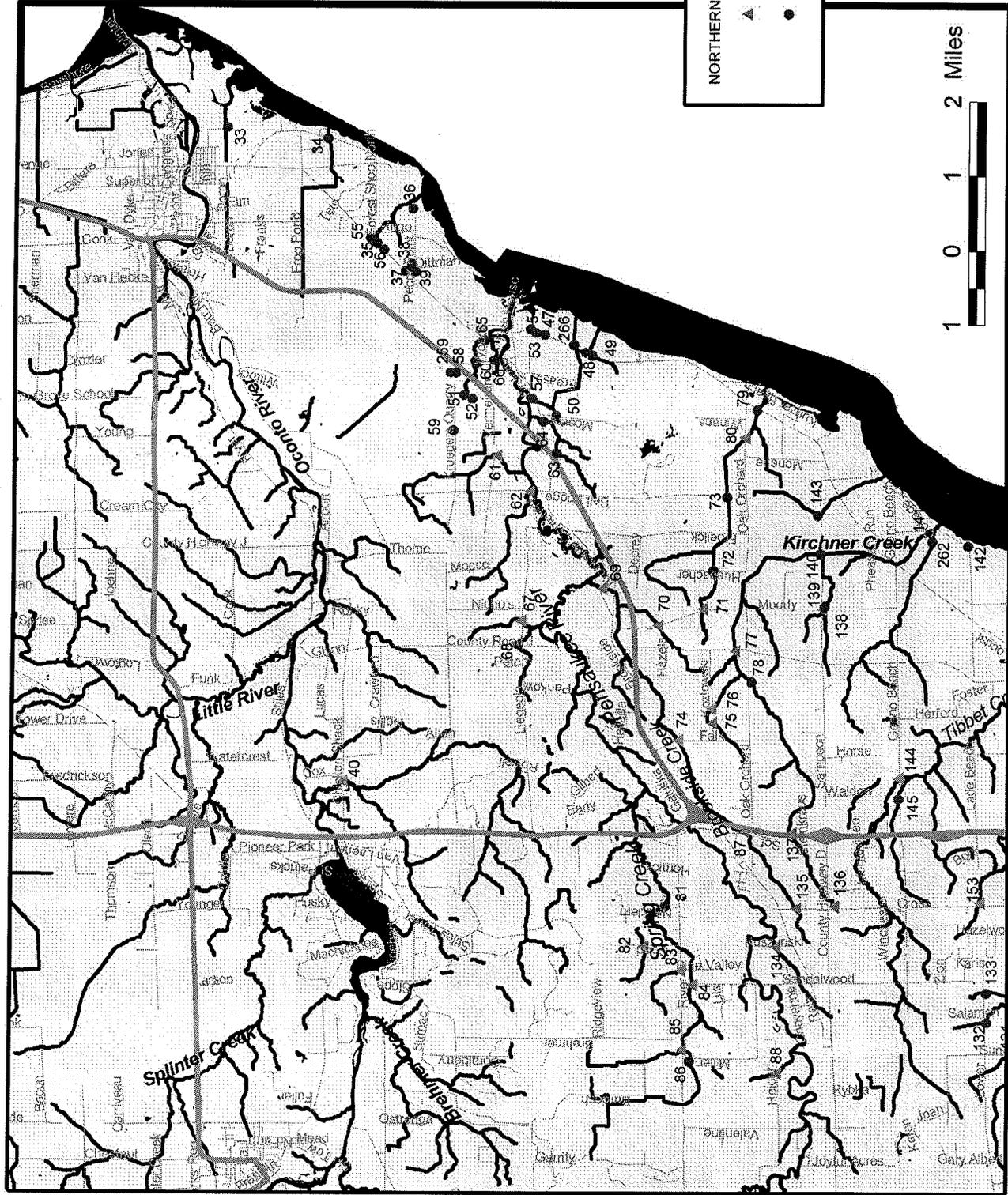
See attached sheet.

**Great Lakes Restoration Initiative –**  
**Restoration of Northern Pike habitat on private land**  
**on the western shore of Green Bay, WI**  
**(Brown & Oconto Counties)**

|                     | Title                                  | No | Hours | Year 01 Subtotal | Year 02 Subtotal | Year 03 Subtotal | Year 04 Subtotal | TOTAL       |
|---------------------|----------------------------------------|----|-------|------------------|------------------|------------------|------------------|-------------|
| <b>PERSONNEL</b>    | Project Coordinator                    | 1  | 1,500 | 37,305           | 37,305           | 37,305           | 37,305           | 149,220     |
|                     | Technicians                            | 2  | 2,080 | 137,045          | 139,786          | 142,582          | 145,433          | 564,846     |
| <b>SUPPLIES</b>     | Outreach & Educational                 |    |       | 5,000            | 2,500            | 1,000            | 1,000            | 9,500       |
|                     | Erosion Control                        |    |       | 4000             | 4000             | 5000             | 5000             | 18,000      |
| <b>EQUIPMENT</b>    | Tuff Book Computer with GIS capability | 1  |       | 5,000            | 0                | 0                | 0                | 5,000       |
|                     | Vehicle (including gas & maintenance)  | 2  |       | 33,800           | 3,800            | 3,800            | 3,800            | 45,200      |
|                     | ATV, trailer, planter, drag            | 1  |       | 20,000           | 0                | 0                | 0                | 20,000      |
| <b>COST-SHARING</b> | Buffers                                |    |       | 25,000           | 25,000           | 62,500           | 62,500           | 175,000     |
|                     | Critical area planting                 |    |       | 15,600           | 26,000           | 26,000           | 26,000           | 93,600      |
|                     | Wetland restoration/enhancement        |    |       | 19,500           | 22,500           | 30,000           | 30,000           | 102,000     |
|                     | Culvert removal/replacements           |    |       | 25,000           | 25,000           | 25,000           | 25,000           | 100,000     |
| <b>Monitoring</b>   | Construction Costs                     |    |       | 90,000           | 112,500          | 150,000          | 150,000          | 502,500     |
|                     |                                        |    |       |                  |                  |                  |                  |             |
|                     |                                        |    |       | \$417,250        | \$398,391        | \$488,187        | \$491,038        | \$1,794,866 |

# Northern Pike Spawning Assessment (1994-2004)

## Sites 33-40, 47-88, 132-145, 153, 259, 262, 266



# Northern Pike Spawning Assessment (1994-2004)

## Sites 146-205, 217-246, 253-258, 260, 264-265, 267-268

